

U.S. Department of the Interior
Bureau of Land Management
White River 2/13/2004 Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2006-122-EA

CASEFILE/PROJECT NUMBER (optional):

PROJECT NAME: Hoary Cress and Perennial Pepperweed Herbicide Control Program

LEGAL DESCRIPTION: White River Field Office resource area

APPLICANT: BLM

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action - Integrated weed control strategy: Under this alternative herbicide control would be used to control Hoary Cress (Cardaria draba) and Perennial Pepperweed (Lepidium latifolium). In this document hoary cress and perennial pepperweed will be cumulatively called whitetop. Control of whitetop using herbivory was analyzed in CO-017-98-074-EA. All control activities would be in compliance with the Final EIS for "Vegetative Treatment on BLM Lands", including Colorado BLM's, Record of Decision of July 1991.

Currently, one or the other whitetop species are found in Yellow creek, Wolf Creek, Deep Channel, Crooked Wash, the White River and Douglas creek. A Pesticide Use Proposal would be prepared with the specific information on each of these sites.

Herbicidal control would be used on all patches of whitetop. Application would be by a combination of truck mounted sprayer, ATV sprayer, Solo backpack sprayer, and Buffalo turbine backpack sprayer. The method of herbicide application would be dependant on the size and location of the weeds to be treated. Control of the whitetop by digging is not practical because of their perennial character and extensive root systems.

All spraying will be under the control of a BLM Certified herbicide applicator.

The specific herbicide to be used is Escort. Active ingredients are metsulfuron methyl at 60 % and inert ingredients of 40 %. The application rate would be 2.0 ozs A.I./acre. This herbicide is used in conjunction with a surfactant to improve penetration through the leaf surface. The surfactant Agri-Dex which is a proprietary: heavy range paraffin-based petroleum oil with polyol fatty acid esters and polyphenol derivatives is classified as an oil based surfactant. This

surfactant is non-ionic dispersible in water as micelles. Biodegradation is presumed to be rapid, but no formal studies have been conducted. This surfactant is practically non-toxic through oral routes to mammals and practically non-toxic to fish and other aquatic biota. This surfactant is approved for use by BLM. Agri-Dex surfactant has an aquatic toxicity of 271 PPM for rainbow trout 96-hrLC50 and 386 PPM for rainbow trout 24-hrLC50

Hilite dye will be used to mark spray areas.

Mitigation and Stipulations Associated with the Proposed Action Alternative:

- Only federally registered herbicides would be used.
- Label directions would be followed even when additional restrictions are required.
- Herbicides would be applied as per label instructions and restrictions.
- The intake operation of water for mixing would be arranged so that an air gap or reservoir would be placed between the live water intake and the mixing tank to prevent back flow or siphoning of chemical into the water source.
- Chemical containers will be disposed of as required by the Environmental Protection Agency.
- Any weed treatment within the following sensitive areas will be subject to interdisciplinary review as a supplement to this Environmental Assessment: Wilderness Study Areas (WSA), Areas of Critical Environmental Concern (ACEC), Riparian Areas, Threatened or Endangered Species habitat, and important wildlife habitats. If the project area is located within a WSA or ACEC the proposal must be reviewed by the Wilderness/ACEC Specialist. Site specific mitigation would be incorporated into the Pesticide Use Proposal.
- Affected riparian areas must be identified in site-specific Pesticide Use Proposal.
- To minimize drift, application of all herbicides would be confined to periods when wind speed is less than 6 miles per hour. Application would not occur during precipitation, or if there is a threat of precipitation.
- Metsulfuron methyl (Escort) should be used in any situation where fisheries are involved or in areas that might be expected to contribute to downstream or adjacent aquatic habitats.
- To further limit the potential for damaging stream habitats supporting a fisheries, application equipment and calibrations (i.e. spray pressure and droplet size) must be selected to deliver sprays which minimize atomized drift in situations where herbicide would be expected to directly contact surface waters (regardless of 6 mph guideline). No

application of herbicide may occur in drainages and valley floors when rain showers are imminent or likely within 3-4 hours.

- Efforts should be taken to avoid or minimize involvement and damage to woody riparian shrubs and tree regeneration, where appropriate, using mechanical control, minimizing the wetting of desirable plant foliage, or using less persistent herbicides beneath or within 25' of desirable plant canopies.
- In the event raptor nest activity is discovered within treatment areas, restrictions on motorized application equipment and approach to the nest site would be applied until nest functions are complete. In addition, standard activity restrictions, outlined in Appendix B of the White River ROD/RMP would be observed until nest functions are complete: Vehicular access by the public on important wildlife habitats and/or during sensitive functional use periods (e.g., big game severe winter range, critical summer use areas, raptor nesting areas, sage grouse reproductive habitats) would be subject to restrictions as directed by the Area Manager. Use of restricted road segments by authorized personnel (e.g., BLM personnel, law enforcement, permitted land users) may be allowed for administrative and operational purposes. Methods used to restrict vehicular access may include: installing lockable gates, barricades or other forms of deterrents, signing, or reclaiming and abandoning roads or trails no longer necessary for management, or other methods prescribed by the Area Manager.
- During preparation of the Pesticide Use Proposal, the project area would be reviewed for known populations of plant species of special concern or their potential habitats. On those areas containing sensitive plants and habitats with good likelihood of containing sensitive plants would be avoided by herbicidal control. Potential habitats would be inventoried for absence of sensitive plants prior to any herbicidal use should manual control prove ineffective.
- Although product selection and label and BLM-imposed application measures are presently considered adequate to prevent adverse affect on animal and plant communities associated with the 100-year floodplain of the White River, extensive weed treatments on the river floodplain or in large channels contributing to the White River's aquatic habitats will require the review and concurrence of the USFWS through the Section 7 consultation process.

Safeguard Measures for the Proposed Action Alternative:

- All individuals associated with the handling or application of herbicides on public lands would be familiar with the chemicals used and emergency procedures to be used in case of herbicide spill.
- The safe use of herbicides includes precautionary measures to prevent accidental spills. The following written precautions describe measures that would be used to reduce the chance of such accidents.

- The applicable Federal regulations concerning the storage and disposal of herbicides and herbicide containers would be followed. These are described in the EPA's "Regulations for acceptance and Procedures for Disposal and Storage", Federal Register notices as amended.
- It is essential to prevent damage to containers so that leaks do not develop; care would be exercised so that containers would not be punctured or ruptured, and so that the lids or caps would not be loosened.
- Precautions would be taken in the loading and stacking of herbicide containers in the transporting vehicle to assure that they would not fall as the vehicle moves.
- Open containers would not be transported. Partly empty containers would be securely resealed before transportation.
- Mixed herbicide will not be transported.
- Each day after returning to the field office, all herbicide containers would be inspected for damage and leaks, and the vehicle would be examined for contamination. Back-pack sprayers will be cleaned each day before placing in the storage room.
- To prevent disturbance of cultural resources vehicle access will be restricted when soils are saturated to the point of leaving ruts more than 1 inch deep.

No Action Alternative: In this alternative, efforts would not be taken to control whitetop.

NEED FOR THE ACTION: In the White River Resource Area, the whitetop have been established for several years and are spreading. All of these species are exotic ground cover dominating plant species. On occupied sites forage and soil cover are decreased to the point of making the area useless. All of these species are aggressive spreaders, using seeds and rhizomes. Whitetop's are associated with moister sites including riparian areas.

Both whitetop species are perennial spreading by seed and rhizomes. The seeds remain viable for a number of years. For this reason we do not expect to eradicate these noxious weeds by a single control effort, but hope to reduce populations to a point that additional control efforts are minimal.

This environmental assessment (EA) discusses a standardized approach to control whitetop on a resource area scale. Prior to initiating actual control a site specific Pesticide Use Proposal would be prepared along with the applicable environmental documentation. If potential impacts of future proposals are sufficiently addressed in this EA, Documentation of NEPA Adequacy (DNA) will be prepared. If potential impacts are not sufficiently addressed, then additional analysis and documentation will be needed.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-13

Decision Language: Manage noxious weeds so that they cause no further negative environmental, aesthetic or economic impact.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River Resource area has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed action is described as an area wide integrated weed control strategy for Hoary Cress and Perennial Pepperweed (whitetop). Dinosaur National Monument is located in the northwestern portion of the resource area and has been labeled as a PSD class II airshed with special designations relating to visibility. The Flattops Wilderness Area is located to approximately 20 miles east of Meeker, CO and has been designated a PSD Class I airshed. Negative impacts to air quality are not anticipated as a result of the proposed action.

Environmental Consequences of the Proposed Action: Impacts from the proposed action are not anticipated.

Environmental Consequences of the No Action Alternative: Impacts from not permitting the area wide pesticide permit are not anticipated.

Mitigation: No additional mitigation is needed.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

Affected Environment: The White River ROD/RMP identified seventeen ACECs encompassing 99,120 acres. Specific information concerning these ACECs is contained in the White River ROD/RMP.

Environmental Consequences of the Proposed Action: Under the proposed action, when whitetop are found, a Pesticide Use Proposal would be prepared. If the weed infestation is within an ACEC the location would be identified and mitigation measures applied. Overall the weed control program is designed to benefit the resources for which an ACEC is designated by controlling noxious weeds and maintaining the native plant communities. If plant species of special concern are identified within the ACEC, mitigation would be as described in the threatened and endangered plant section. On those ACECs where special status animals are of concern, special consideration will be given to the control method as described in the threatened and endangered animal section.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no treatment of whitetop within ACEC's. These species would have the opportunity to increase and spread on suitable habitats. This would degrade native plant communities and would negatively impact the resources for which several of the ACECs were designated.

Mitigation: See mitigation and stipulations outlined in the proposed action.

CULTURAL RESOURCES

Affected Environment: Inventory data for the area has been primarily driven by the need for compliance with historic preservation laws as a result of energy related development. As a result, inventory data is unevenly distributed and does not always cover areas where cultural resources might be regarded as most likely. Consequently only a relative few resources have been recorded to date. James Grady, in his Doctoral Dissertation (1980), presented the hypothesis that areas at the higher elevations in the Piceance Basin/Roan Plateau area of Northwest Colorado were only used for short periods in the summer months and then primarily as the prehistoric occupants hunted deer and elk for hides and meat, which was a major source of protein in aboriginal diets. If such was the case camp sites would be relatively scarce and located within one kilometer of so of reliable supplies of domestic water. Other sites would likely be kill/butchering sites which may be very fugitive and difficult to identify and/or evaluate.

Since the completion of Dr. Grady's studies a considerable body of additional inventory data has been acquired which has improved the understanding of the prehistoric occupation of the area. Specifically those areas below about 7500 feet mean sea level along areas of live water within a distance of 1.5 kilometers tend to have a much higher potential for site presence. Sites are

shown to range from single episode hunting events to long term and/or multiple episode camp sites.

Environmental Consequences of the Proposed Action: Spraying of herbicides is expected to have little, if any, effect on cultural resources that might be present. Impacts would mostly be confined to compaction from vehicles and possible dislocation of surface artifacts during wet and muddy conditions.

Cultivation may cause crushing, breaking and/or destruction of artifacts. This hazard is most likely to occur on resources that are subsurface and cannot be identified on the ground surface by standard inventory techniques.

The above losses would be inadvertent and irreversible. However, current data are inadequate to quantify the resultant permanent loss to the regional database.

Environmental Consequences of the No Action Alternative: There would be no impacts to cultural materials under the No Action Alternative.

Mitigation: See the mitigation measures outlined in the proposed action.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The White River Resource Area contains a wide variety of plant communities ranging from salt-desert shrub to subalpine fir. Perennial pepperweed is generally an obligate of riparian zones or the terraces immediately above the riparian areas. This weed has also been found growing around stock ponds and large mud puddles. Hoary cress has a wider range of habitats and may be adapted to most of the plant communities in the resource area. Both of these species are aggressively spread by both seeds and rhizomes.

Environmental Consequences of the Proposed Action: Under the proposed action there would not be any seeding of treated areas, and therefore would not be any opportunity for introduction of non-native plant species.

There is concern that control efforts could spread seeds of whitetop. If possible vehicles will not enter the infested area but will stay on the perimeter. The applicators will need to pay attention to mud on shoes and seeds clinging to apparel.

Environmental Consequences of the No Action Alternative: Under the no action alternative, whitetop would not be controlled. There would also not be any seeding or any opportunity for introduction of non-native invasive species. Whitetop would continue to expand and dominate plant communities. Forage production and the benefits of healthy plant communities would be foregone. The cost of control would increase as the area of whitetop increased. Failing to control whitetop would provide a seed source for adjacent allotments.

Mitigation: No additional.

MIGRATORY BIRDS

Affected Environment: A large array of migratory birds fulfills nesting functions throughout the Resource Area's shrubland and riparian habitats during the months of May, June, and July. This action would concentrate on whitetop infestations associated with channel features and valley terraces of this Resource Area's larger, lower elevation drainages. In many cases, this weed is intermixed extensively with native vegetation and control efforts would tend to involve lengthy portions of the drainage. Woody riparian growth is well represented along the White River and Douglas Creek and these systems in particular support a strong contingent of riparian-affiliated (willow/tamarisk, Fremont cottonwood) neo-tropical migratory birds, including: yellow warbler, yellow-breasted chat, blue grosbeak, and lazuli bunting.

Yellow Creek, Wolf Creek, Deep Channel Creek, and Crooked Wash are intermittent streams with perennial reaches. These systems have limited woody development (i.e., primarily scattered tamarisk), but much of their length sustains well developed obligate and facultative herbaceous growth along sagebrush and rabbitbrush floodplains and terraces. There are fewer riparian species found in these habitats (e.g., song sparrow), the birds tending, rather, to parallel those found in adjacent sagebrush, greasewood, and pinyon-juniper habitats (e.g., house wren, blue-gray gnatcatcher, spotted towhee). Wolf Creek is largely ephemeral with a few in-channel springs and seeps that support diminutive patches of obligate vegetation (sedge/rush, willow). Birds associated with these deeply-incised basin big sagebrush dominated channels are strictly upland in nature, keying on the heavy sagebrush cover that is unavailable in surrounding salt-desert uplands (e.g., northern mockingbird, spotted towhee, loggerhead shrike).

A number of birds associated with these targeted or adjacent terrestrial habitats have been identified as having higher conservation interest by the Rocky Mountain Bird Observatory and Partners in Flight program (table below). Those species marked with an asterisk are widely distributed in suitable habitat. The gray vireo inhabits upland juniper communities in the Rangely area and would not be exposed to control activities. Sage grouse are an uncommon species in the lower elevation sagebrush habitats associated with the Wolf Creek, Deep Channel, and Crooked Wash basins and it is likely that nesting and brooding birds are widely dispersed across extensive upland sagebrush habitat. The lower Wolf Creek basin is also occupied by small numbers of burrowing owl and loggerhead shrike. Burrowing owl, which use prairie dog burrows as nest habitat, is widely dispersed across about 15,000 acres of lower Wolf Creek's prairie dog habitats. Loggerhead shrike nest in tall greasewood or sagebrush plants often located within or on the edge of Wolf Creek's (and its tributaries) incised channels.

Migratory Birds with High Conservation Priority by Habitat Association

Salt desert	sagebrush	Pinyon-juniper
burrowing owl loggerhead shrike sage sparrow*	Greater sage-grouse Brewer's sparrow* green-tailed towhee*	gray flycatcher* gray vireo pinyon jay* juniper titmouse* black-throated gray warbler* violet-green swallow*

Environmental Consequences of the Proposed Action: Because migratory bird populations tend to be more abundant and diverse as vegetation volume and stratification increase, bird nesting activity in areas heavily infested with the whitetop group is extremely limited. Short duration and localized herbicide applications or mechanical removal activities during early to mid-summer may cause temporary displacement of adult birds attending nests in nearby habitats, but these episodes would have a low probability of disrupting an individual nesting effort or adversely influencing a nest's outcome. Because these weeds have no functional value as nesting substrate and suppress native vegetation by dominating sites of infestation, localized and temporary control activities are viewed as a desirable trade-off in preventing further seed dissemination and continued expansion of weed-related influences.

Environmental Consequences of the No Action Alternative: In the absence of weed control work, there would be no potential to disrupt breeding activities of migratory birds. Unabated, the spread of whitetop in these channels would not only seriously degrade nest habitat conditions in the long term, but would eventually necessitate broader scale and more aggressive herbicide application practices, which could involve longer duration and more extensive disruptions of nesting habitats.

Mitigation: None.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment (This includes all information related to Public Land Health Standard 4): All perennial and intermittent stream systems within the Resource Area eventually contribute to endangered Colorado River fisheries in the Colorado, White, Green, and Yampa Rivers. The White River between Rio Blanco Lake and the Utah state line is designated critical habitat for the endangered Colorado pike-minnow, although present occupation is confined to the reach below Taylor Draw dam. Maintenance of proper bank, channel and floodplain function is specifically identified as essential to the continued existence of this fishery.

The White River corridor serves as an activity hub for nesting and wintering populations of threatened bald eagles. A number of nest and winter roost sites are associated with the river's cottonwood galleries, though none are located in close proximity to tributary treatment sites.

Under the auspices of a non-essential, experimental population rule and a cooperatively developed ferret management plan, black-footed ferrets have been released (or dispersed from Utah releases) annually in the Coyote Basin and Wolf Creek Management Areas since 1999. Ferret distribution is confined to the Area's lower elevation salt desert communities that support white-tailed prairie dogs, essentially a narrow corridor along Highway 40 from Elk Springs to the Utah line. Ferrets have successfully reproduced in Coyote Basin and Wolf Creek.

There are a number of BLM-sensitive species that may be associated with lower elevation riparian and bottomland habitats targeted for weed treatment. These include 3 species of bats, a

number of fish that occupy the White River and its larger tributaries, greater sage-grouse, ferruginous hawk, white-tailed prairie dog, and two amphibians.

The distribution and ecology of the Townsend's big-eared bat, and fringed and Yuma myotis (bats) are poorly understood in the project area, but limited collections have documented their presence from western Colorado's semi-desert shrublands, woodlands, and canyonlands. The big-eared bat and Yuma myotis, in particular, prefer to forage over riparian habitats. These bats are believed to use, almost exclusively, caves, mines, and unoccupied buildings for night, nursery, and hibernation roosts. Although rock outcrops and mature juniper trees that may serve as temporary daytime roosts for small numbers of bats are well distributed in these larger valleys, and relatively extensive riparian communities are available in each of the drainages, there is only 1 abandoned underground mine (gated, but supporting no wintering or maternal functions), no known caves, and few, if any, suitable unoccupied buildings within 10-15 miles of the treatment areas. It is likely these bats occur in small numbers and may concentrate seasonally along the Resource Area's larger drainages, but the overall capacity of the habitat to support robust bat populations is probably sharply constrained by the paucity of suitable reproductive roost and hibernaculum sites.

There are a number of fishes that are listed by BLM as sensitive (i.e., effectively the same status as species candidate for listing), including: roundtail chub, and bluehead, flannelmouth, and mountain suckers. Populations of these fish are primarily confined to the White River, although Piceance Creek and possibly the lower extremities of Crooked Wash, and Yellow and Douglas Creeks may be used seasonally by small numbers of sub-adult fish. See the Aquatic Wildlife section for discussion pertaining to BLM-sensitive Colorado River cutthroat trout.

White-tailed prairie dogs are broadly distributed at lower elevations along the lower half of the White River valley, primarily in xeric salt-desert communities that are dissected by deeply incised drainages that are inordinately susceptible to whitetop infestations. Young prairie dogs emerge from natal burrows in late May and early June. Coincident with prairie dog distribution, burrowing owl and ferruginous hawk are uncommon breeding species that have a high conservation priority for the Colorado Division of Wildlife (CDOW) and BLM. The owls return to occupy a prairie dog burrow system in early April and begin nesting soon afterward. By October, the birds leave for southern wintering grounds. Ferruginous hawk begin nesting by mid-April, their nests almost exclusively situated on ridges or upper basin positions in isolated junipers or artificial nest platforms built in the 1980's. Young are normally fledged by mid-July.

Northern leopard frogs, although localized, are relatively common and well distributed along portions of Piceance Creek, Crooked Wash, and the lower White River and are found widely in upland stockponds north of the White River. Northwest Colorado is on the eastern periphery of Great Basin spadefoot distribution (i.e., broadly distributed across Great Basin). Very little specific habitat or population information is available for this species in Colorado, but the species is generally associated with arid shrublands and woodlands. The Colorado Herpetofaunal Atlas lists 2 recent records (1997) from Rio Blanco County; site locales generally being associated with off-channel man-made ponds in the upper White River valley and lower Cottonwood Creek. Earlier records include the Piceance Creek valley in 1973 and along the Yampa River in Dinosaur National Monument in 1949. Based on available literature and known

records, this toad's abundance and distribution appears to be constrained by the availability of waters sufficiently persistent to support the 2-4 week period necessary from egg-laying through metamorphosis to adult forms. Spadefoots this BLM staff has encountered tend to be associated with semi-permanent stockponds along the Utah border that support at least modest amounts of emergent or woody riparian vegetation.

Environmental Consequences of the Proposed Action: Aquatic organisms are typically more vulnerable to herbicide exposure and affect than terrestrial wildlife. In preceding NEPA analyses for noxious weed control, metsulfuron methyl (Escort) was recommended for use whenever possible in close proximity to fisheries or important contributing systems because it poses virtually no toxic threat to aquatic wildlife (fish and aquatic invertebrates ($LC_{50} > 150$ mg/liter) and is not known to bioaccumulate. The Escort label requires that a surfactant be used to gain effective vegetation control and a widely used non-ionic surfactant, Silwet, has been used previously. Subsequent investigation indicated that this surfactant was not only moderately to highly toxic to fish (0.6-3.0 mg/l) and aquatic invertebrates (10-20 mg/l), but these compounds are generally not readily biodegradable and the breakdown compounds have a tendency to be more toxic than the parent compound. In an effort to reduce the acute toxicity and residual accumulation of herbicide/surfactant mixes in these situations, BLM is presently proposing the use of Agri-Dex™, a crop-oil based surfactant that is considered practically nontoxic to aquatic organisms and is presumed to undergo rapid environmental decay. By itself, Agri-Dex has demonstrated a 96-hr LC_{50} of 271 mg/l and a 24-hr LC_{50} of 386 mg/l in rainbow trout—a toxicity about half that of Escort. Rather than the more typical synergistic effect, the toxicity of an herbicide formulation of Agri-Dex /imazapyr was lower than either constituent (Fisher et al 2003).

In summary, the proposed herbicide and its surfactant (i.e., Escort and Agri-Dex) each possess relatively low toxicity to aquatic organisms and are considered to be practically non-toxic to fish and aquatic invertebrates (*Vegetation Treatment on BLM Lands, 1991*). In addition, although this herbicide is soluble in water, adsorption and uptake by plant matter, as facilitated by the surfactant, would reduce the quantity of herbicide available for offsite transport.

Available literature also suggests that amphibia (e.g., leopard frogs, spadefoot toads) are generally less sensitive to herbicide exposure than are aquatic invertebrates or fish (*USFWS, 1986, Manual of Acute Toxicity Resource Publication 160*). The provisions under which herbicides would be applied (i.e., application protocols, small treatment extent, low application rates) would be sufficient to avoid any reasonable likelihood that special status fish or amphibians or their prey base would be subjected to adverse acute or chronic herbicide exposure.

Whitetop are ineffective in resisting bank erosion and, as it increasingly supplants or suppresses the expression of beneficial wetland and riparian vegetation, any and all wildlife attributes associated with riparian habitats would be foregone in the long term. Unabated, it is likely that downstream systems would be subject to elevated lateral instability and excessive turbidity resulting from increasingly heavy and persistent sediment loads. Vigilant suppression of small-scale weed infestations would help prevent weeds from compromising channel and floodplain functions that are key to maintaining suitable habitat conditions for Colorado River pike-minnow

and bald eagle along the White River and other identified channel systems important for sensitive species associated with aquatic and riparian habitats.

The herbicide mixture proposed for use is considered slightly to practically non-toxic to mammals and birds via oral ingestion and the exposure pathways via herbivory would be sharply limited in time and space. Direct dermal exposure may be a mild skin and eye irritant.

Because of the current distribution of whitetop infestations (e.g., channels and adjacent terraces) and the fact that these weeds possess no attributes attractive to special status species as forage or cover, substantive herbicide exposure in terrestrial situations is highly improbable. Owing to the chemical's relatively nontoxic character, the limited extent of application, and limited means for exposure, proposed spot treatment of these chemicals would pose no conceivable threat to black-footed ferret, white-tailed prairie dog, bald eagle, burrowing owl, ferruginous hawk, the 3 species of bats, or their prey base. Summer control activities would be short term and dispersed and would not represent activity levels or time frames that would have any substantive influence on sensitive habitats and/or the breeding activities of special status species.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no potential for exposing special status species to fugitive herbicide in the near term. Failure to control these weeds would, however, allow noxious weeds to become increasingly well established in watersheds contributing to the White River and pose a threat to the integrity of downstream aquatic habitats that harbor special status species, particularly bald eagle, Colorado pike-minnow, and the contingent of BLM-sensitive fish. Failure to treat these aggressive weeds in a timely and effective fashion, particularly those prone to proliferate in bank and floodplain situations, would prompt rapid and extensive dissemination of seed downstream. Weed proliferations along the tributary channels and river corridor would inevitably displace or thin erosion resistant bank vegetation, increase sediment yields, and slow or reverse channel/bank/floodplain restoration processes, and would, thereby contradict one of the major recovery goals for critical habitat established by the U.S. Fish and Wildlife Service for the Colorado pike-minnow, that is, maintenance of proper functioning condition on the river's 100-year floodplain. Once entrenched, subsequent control of these weeds would necessitate more intensive, widespread use of herbicides in increasingly close association with occupied habitats; increasing the likelihood of acute or chronic toxicity to the fish or other important aquatic constituents (e.g., amphibians, invertebrates). Such situations invariably necessitate more costly resource tradeoffs to gain acceptable levels of weed control. Relatedly, maintenance of proper functioning riparian processes along the White River (i.e. BLM lands within the White River ACEC) is considered paramount in maintaining the long term suitability of these riverine galleries for bald eagle use (continued availability of sites for cottonwood regeneration).

Mitigation: See mitigation and stipulations in the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: Currently, this standard is being met across the Resource Area with populations and habitat suitability for the special status species discussed above generally stable. Recognizing the progressive deterioration of rangeland, riparian, and aquatic habitats attributable to the proliferation of noxious weeds, a prominent Public Land Health measure involves management

that minimizes noxious and undesirable weed expression in the overall plant community. The proposed action complements this goal and, as mitigated, has appropriate safeguards that would effectively avoid those adverse influences chemical exposure may have on individual animals or habitat conditions, thereby maintaining a situation where the standard is met through time. Conversely, the no action alternative would promote incremental increases in acreage supporting weed monocultures, and over time, increasingly large landscape parcels would fail to meet this standard.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: Habitats within the White River Resource Area have been identified for 19 plant species that are either rare and endemic or rare and are considered as a BLM sensitive species. Many of these sensitive species are endemic to the Green River geologic formation. This formation is limited to the Uintah Basin of Utah and the Piceance Basin/Roan Plateau of Colorado, and contains several locations of threatened or sensitive plant species. Most of the Green River shale formations in Piceance Basin and along Raven Ridge have been inventoried with locations of known populations of sensitive plants and potential habitats identified. The Draft White River, Resource Management Plan contains the species list, status (pages 3-16 to 3-18) and location (map 2-11) of the T & E and sensitive plant species.

Environmental Consequences of the Proposed Action: Following the mitigation described below, on areas containing sensitive species, herbicidal control would not be used, and the preferred method of control would become manual control. Areas of potential habitat for sensitive plants would be inventoried for their absence prior to any herbicidal usage should manual control prove ineffective.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no impacts to sensitive species relative to mechanical or herbicidal control.

Mitigation: See mitigation and stipulations identified in the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: The no action alternative would negatively influence the Threatened, Endangered, or Sensitive plant species. There is no reasonable likelihood that the proposed action would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Under the proposed action Escort would be used for herbicidal weed control. This chemical is approved for use on public lands and was analyzed in the EIS for Vegetation Treatments on BLM Lands in the 13 Western States (BLM 1991).

There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: Use of herbicides for control of noxious weeds is a common and reasonable practice. Use of this chemical as detailed in this environmental assessment would prevent any generation of hazardous wastes.

No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: There would be no opportunity for development of hazardous waste. No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The BLM shall collect and properly dispose of any solid wastes generated by the proposed action.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface water quality data is available for several sites on the White River, major tributaries, and many ephemeral drainage in the Piceance Basin through various USGS publications. The Colorado Department of Public Health, Water Quality Control Commission, has adopted (Colorado Department of Public Health 2004) basic standards and an antidegradation rule for all surface waters in the resource area. These standards reflect the ambient water quality and define maximum allowable concentrations for various water quality parameters. Most surface water segments on BLM lands are in the "use protected" category that states, at a minimum, all state surface waters shall be maintained and protected. No further water quality degradation is allowable that would further interfere with or become harmful to that streams designated use.

Environmental Consequences of the Proposed Action: Drift into drainage bottoms or springs may occur, altering water quality temporarily. Temporary reductions in vegetal cover resulting from the application of herbicide may result in short term increases in sedimentation rates to the affected watersheds reducing water quality. Use of best management practices outlined as mitigation in the proposed action would nearly eliminate potential adverse impacts associated with the proposed action.

Environmental Consequences of the No Action Alternative: There would be no opportunity for drift of herbicides into drainage bottoms or springs, and no impacts on water quality would result from herbicidal applications. However, the no action alternative would allow the spread of hoary cress and perennial pepperweed which may replace existing native vegetation in riparian areas. A net loss in existing native riparian vegetation could compromise

the stability of stream bank channel morphology and potentially result in elevated stream bank erosion.

Mitigation: Follow best management practices (BMPs) as outlined as mitigation in the proposed action. Monitor areas near stream banks and riparian communities that received significant application of herbicides. Should monitoring reveal that a loss of effective ground cover appears to increase localized erosion rates the BLM will implement site specific mitigation (e.g. seeding, bank armoring) to minimize soil loss.

Finding on the Public Land Health Standard for water quality: Implementation of the proposed action would not cause water quality to be outside the standards set by the State of Colorado, which is the standard for water quality on public lands.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The WRFO area contains a number of riparian zones. Table 2-9, Appendix D, page 8 of the White River ROD/RMP shows the high priority riparian habitats, Functioning Condition, acres and ecological condition. Twenty eight riparian areas are identified containing 719 acres of riparian habitat. Whitetop have been found of Main Stem Douglas Creek, East Douglas Creek, Yellow Creek, Deep Channel, Wolf Creek, Divide Creek Reservoir, Peterson Draw Reservoir, Little Indian Draw, and Ryan Gulch.

Hoary Cress was found in East and Main-stem Douglas Creek. The sites in East Douglas Creek are on private lands and are being controlled by the landowner. The site in Main-stem is on an upper terrace approximately 200 feet from the waters edge. The vegetation type is greasewood and tamarisk the size of the infestation is estimated at 1/10 acre. a greasewood/sagebrush dry wash.

Hoary Cress and Perennial pepperweed have both been found in Yellow Creek the Hoary cress infestation was treated in 2000 and has been under surveillance since with no outbreaks. Perennial pepperweed has been found between Greasewood Gulch and the White River. The upper portion was treated in 2003. The lower portion was not treated at that time because of a lack of access. Yellow creek is a perennial stream with well developed woody riparian habitat and understory of grasses and sedges.

An infestation of Hoary Cress was reported in the fall of 2003 on public lands in Ryan Gulch. The size of this infestation was estimated at less than 10 acres on trespass haylands. This infestation would be verified and treated during 2006.

Deep Channel, Crooked Wash and Wolf Creek are all infested with Perennial Pepperweed. A cooperative approach is being used to control Deep Channel and Crooked wash because of the large percentage of private lands involved. Wolf Creek is proposed for treatment in 2007 starting at Highway 40 and working to the top of the infestation near Peterson Draw. Spraying would be by 4-wheelers supported by truck mounted sprayers. Wolf creek is an ephemeral channel with sagebrush and greasewood channels and intermittent coyote willows.

Environmental Consequences of the Proposed Action: During preparation of a site-specific Pesticide Use Proposal, affected riparian areas would be identified along with precautions and measures to avoid impact to these sensitive areas. Precautions would be imposed, in addition to the buffer strips identified in the mitigation section. If these noxious weed species are within a riparian community, there is the possibility of herbicide drifting into the riparian zone. With the mitigation and stipulations identified within the proposed action the actual opportunity for damage from herbicides is small. If herbicides were to contaminate the riparian zone, those plants which are susceptible to Escort may be damaged or killed, depending on the concentration and the non-target susceptibility. Broad based treatments of the riparian area would decrease the influence of whitetop in terms of stream bank stability increasing the instability and opportunity of erosion. Over time native communities would reestablish on the stream banks providing stability.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no opportunity for herbicides to contaminate riparian zones, and there would be no opportunity for non-target plants to be affected. Whitetop would proliferate and dominate the stream bank and upper terrace. The protection of stream banks provided by whitetop is expected to be far less than adapted native communities, overall decreasing stream bank stability, increasing width/depth ratios, and overall lowering the effectiveness of the riparian area to manage flood flows.

Mitigation: See the mitigation and stipulations identified in the proposed action.

Finding on the Public Land Health Standard for riparian systems: Noxious weeds are one of the greatest threats to the health of riparian communities. The two noxious weeds detailed in this environmental assessment are adapted to riparian habitats and exert great influence on the development of the herbaceous component. In general the riparian herbaceous component is resistant to herbicide application, as are willows where the foliage is avoided. The proposed action would positively affect riparian areas. The no action alternative would allow whitetop to proliferate throughout the area decreasing productivity. The no action alternative would allow noxious weeds to increase within riparian areas which is not in compliance with the “vigorous, desirable plants are present” indicator for the riparian health standard.

WILDERNESS

Affected Environment: There are six Wilderness Study Areas (WSA) encompassing approximately 81,000 acres within the WRFO area. WSAs are managed to provide for natural ecological processes to take precedence over the hand of managers however under the Interim Management Policy for lands under wilderness review (H-8550-1) vegetative manipulation by chemical, mechanical, or biological means will be allowed when there is no effective alternative and when control of the noxious weed is necessary to maintain natural ecological balance within a WSA or portion of a WSA. In all cases where vegetative manipulation is proposed, the activity must not adversely impact wilderness values within any portion of the WSA. Noxious weeds may be controlled by grubbing or with chemicals when they threaten lands outside the WSA or

are spreading within the WSA, provided the control can be affected without adverse impacts on wilderness values.

Environmental Consequences of the Proposed Action: Controlling whitetop would maintain or enhance the wilderness values by preventing these species from replacing native desirable plant species. By controlling or limiting the spread of noxious weeds, the naturalness of the WSA would be preserved. If motorized vehicle use is the minimum application tool, the site, sound, or tracks from the equipment may detract from the current or future (if tire tracks persist) wilderness visitors experience of solitude and impact primitive recreation. However, this is unlikely as most visitors do not utilize WSAs during the spraying season.

Environmental Consequences of the No Action Alternative: The no action alternative would allow degradation the naturalness component of the of wilderness values by allowing the noxious weeds to spread on suitable sites.

Mitigation: See mitigation and stipulations identified in the proposed action.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No prime and unique farmlands, or Wild and Scenic Rivers exist within the area affected by the proposed action. No flood plains would be affected. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: Soils of the area are generally deep and well drained with a loam surface texture and channery sandy clay loam subsoil extending to greater than 30 inches. In an undisturbed condition runoff is slow and the erosion hazard is slight. However, if the surface is disturbed, and runoff is rapid the erosion hazard can be severe

Environmental Consequences of the Proposed Action: Little if any negative impacts are expected as a result of the proposed action. A temporary increase in sedimentation could be expected from vegetation loss and continue until successful revegetation has occurred. Spraying for whitetop would allow a more protective vegetative species to grow and actually help to reduce overland sedimentation.

Environmental Consequences of the No Action Alternative: Infestations of white top and hoary cress would become substantial while a net loss in grass species needed to maintain soil

stability would occur. Stream channel/bank morphology would be compromised and long term increases in sediment and salt loads would be expected.

Mitigation: None

Finding on the Public Land Health Standard for upland soils: Controlling noxious weed infestations is critical to maintaining healthy and productive plant communities which are critical to upland soils health. The proposed action would contribute to meeting the standard for upland soils health.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The project area is generally the first terrace above the stream channel. Common species of this area include cottonwoods, tamarisk, greasewood, Russian olives, willows and various grasses, sedges and rushes.

Environmental Consequences of the Proposed Action: Escort herbicide is specific to the control of broadleaf plants. This specificity allows the pest plants to be controlled while leaving the grasses relatively unaffected. With the pest plants removed, the remaining grass species increase in dominance, which decreases the ability of the weed seedlings to becoming established. As a result Escort's specificity to broad leaf plants there would be a loss of native broadleaf species, annuals and perennial.

Environmental Consequences of the No Action Alternative: White-tops would increase and spread in the native plant communities. There would also be a reservoir of seed produced that would be available to transport off-site causing additional outbreaks.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Controlling noxious weeds, as described in the proposed action, is integral to having public lands which meet the indicator of "Noxious weeds and undesirable species are minimal in the overall plant community."

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Perennial streams that support aquatic habitats are distributed across the Resource Area. Of most concern are those supporting or contributing directly to fisheries, particularly those that support populations of Colorado River cutthroat trout (primarily the East Douglas drainage) or contribute to native fisheries in the White River (see T&E Species section). The cutthroat is a BLM sensitive species and one of high state concern. Although the small cutthroat populations in this Resource Area suffer variously from hybridization with introduced trout, the current genetic conformation of these fisheries is of lesser consequence than the aquatic and riparian processes and conditions on which fishery viability depends.

Environmental Consequences of the Proposed Action: As discussed in the T&E Species section, metsulfuron methyl (Escort) is considered to be practically non-toxic to fish and aquatic invertebrates (*Vegetation Treatment on BLM Lands, 1991*). Label consistent application of Escort, in addition to the proposed BLM safeguards, would reduce the potential for aquatic contamination and pose virtually no toxic threat to aquatic wildlife, including amphibians, fish or macro-invertebrates or to those resident birds and mammals that may be associated with riparian or aquatic systems.

Consistent spot treatment of noxious weeds would sharply limit the development and/or influence of weed populations in aquatic and adjacent riparian communities. Weed expression on bank and floodplain features contributes to the instability of bank and incise walls by suppressing vegetation forms that provide effective erosion resistance. Left unattended, weeds would likely assume a primary role in aggravated bank and channel erosion, disrupting channel stability and degrading conditions conducive to the support of aquatic organisms (e.g., unstable bed substrate, decreasing depths, increasing and more widely fluctuating water temperatures). Vigilant control of weeds in these situations will minimize both the volume of herbicide applied to the target vegetation and the minute fraction that unavoidably reaches the stream system. Again, the application protocols should drastically minimize direct and indirect entry to aquatic communities such that control activities would pose no conceivable threat to adjacent or downstream aquatic communities.

Environmental Consequences of the No Action Alternative: There would be no potential for direct adverse impacts related to chemical application. Failure to treat these aggressive noxious weeds, particularly those prone to proliferate in bank and floodplain situations, would prompt rapid and extensive dissemination of seed and establishment of the weed throughout the lower White River valley. Neglecting control and allowing further weed proliferation would, over time, impoverish riparian character, compromise channel function, and forego any wildlife attributes associated with riparian habitats in the long term. It is likely that downstream systems would be subject to increasingly heavy and persistent chemical loads since control would ultimately necessitate broader scale treatment, perhaps with stronger, more persistent herbicides.

Mitigation: See mitigation and stipulations identified in the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Overall aquatic habitat conditions within the WRFO resource area are generally meeting or moving toward meeting Standard 3. The proposed action would complement the meeting of this standard by minimizing occupation of aquatic habitats by noxious weeds and reducing the adverse influences of weeds on riparian and channel functions. Safeguards incorporated within the proposed action would prevent aquatic organisms from being exposed to harmful levels of chemical such that weed control would have no effective influence on the demographics or distribution of aquatic organisms in the WRFO.

The no action alternative would aggravate the dissemination of noxious weed seeds throughout a watershed and allow for increasing establishment and expression of undesirable vegetation forms

in riparian and aquatic communities. Over time, this alternative would promote a situation where increasingly large landscape parcels would fail to meet this standard.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The Resource Area supports a season long use by big game, sage and blue grouse, as well as a diverse assemblage of non-game birds and mammals. Importantly, animal use associated with the late spring through early fall periods (at least) are in many ways tied to the availability, condition, and form of herbaceous and woody broadleaf vegetation as a component of cover and/or forage.

Well-distributed supplies of broadleaf forage are important to big game for prolonging adequate nutritional planes during the winter (deciduous browse) and sustaining high nutritional levels during spring recovery, the reproductive period, and fat accumulation for winter (primarily succulent herbaceous forms).

Nongame and small game populations are typically more abundant and diverse in shrub and woodland communities with well-developed herbaceous understories and woody canopies. These small mammal and bird populations are important prey items for all raptors found in the area, and are integral with the maintenance of high levels of community diversity.

Environmental Consequences of the Proposed Action: Escort is very slightly to moderately toxic to mammals and birds. Targeted weeds offer no attraction to wildlife as cover or forage, and although interspersed among desirable native communities, the treatment areas would be small, and chemical application rates minute, such that it would be highly improbable that resident animals would be exposed to potentially damaging levels of herbicide via dermal or oral pathways. Although chemical treatment would likely suppress or destroy desirable broadleaf vegetation interspersed with weeds, timely control of small or confined infestations would ultimately benefit all wildlife values by minimizing the extent of subsequent herbicide treatment and maintaining the diversity and productivity of affected rangeland vegetation.

Summer control activities would be short term and localized and would not involve activity levels or time frames that would not normally be deleterious to sensitive habitats and/or breeding activities of big game, grouse, or raptor. In the event raptor nest activity is discovered within treatment areas, restrictions on motorized application equipment and approach to the nest site would be applied until nest functions are complete.

Short duration and localized herbicide applications during early to mid-summer may cause temporary disruption of non-game animals during the reproductive season, but these episodes would have no reasonable probability of adversely affecting local reproductive efforts or recruitment even at fine landscape levels. Because these weeds have no functional value as foraging or nesting substrate and suppress native vegetation by dominating sites of infestation, localized and temporary control activities are viewed as a desirable trade-off in preventing further seed dissemination and continued expansion of weed-related influences.

Environmental Consequences of the No Action Alternative: Unabated, the spread of these weeds across the landscape would eventually necessitate broad scale herbicide application which would inescapably involve more severe wildlife concessions manifested by more extensive and longer term losses of forage and cover provided by broadleaf woody and herbaceous vegetation and increasing and expansive levels of control activity.

Isolated whitetop infestations, although not now exerting any marked influence on adjacent rangeland communities, represent potential for exponential spread and becoming an influential herbaceous component. Whitetop growth habit is capable of suppressing intermixed herbaceous growth, while providing no beneficial attributes as wildlife cover or forage. The ultimate quality and utility of adjacent habitats would become increasingly compromised as degradation of broadleaf composition and diversity progressed. Eliminating this threat while the weed is generally confined to smaller infestations is vastly superior to the alternative of widespread herbicide application across the landscape and its functional wildlife habitats.

Mitigation: See mitigation and stipulations identified in the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Currently, Standard 3 is being met broadly across the Resource Area. Resident wildlife populations are appropriate to the region and there are no known instances where population viability is in question. The extent and distribution of suitable habitat is generally stable and consistent with landscape capability. Recognizing the progressive deterioration of rangeland habitats attributable to the proliferation of noxious weeds, a prominent indicator for determining Public Land health involves management that minimizes noxious and undesirable weed expression in the overall plant community. The proposed action complements this goal and, as mitigated, has appropriate safeguards that would effectively avoid those influences chemical exposure may have on individual animals or habitat conditions, thereby maintaining a situation where the standard is met through time. Conversely, the no action alternative would promote incremental increases in acreage supporting weed monocultures, and over time, increasingly large landscape parcels would fail to meet this standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		
Fire Management	X		
Forest Management			X
Geology and Minerals	X		
Hydrology/Water Rights			X
Law Enforcement		X	
Paleontology			X

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Rangeland Management			X
Realty Authorizations	X		
Recreation		X	
Socio-Economics		X	
Visual Resources		X	
Wild Horses			X

FOREST MANAGEMENT

Affected Environment: Whitetop habitat is found in riparian forest types including cottonwood, dogwood, and boxelder communities. These noxious weed species are expected to affect forest health by inhibiting reproduction of riparian tree species.

Environmental Consequences of the Proposed Action: To date no adverse impacts to riparian forests have been found.

Environmental Consequences of the No Action Alternative: Whitetop would continue to spread through riparian forest stands dominating under story species, decreasing the opportunity for reproduction of native riparian woodland species.

Mitigation: Avoid application to riparian woodland species.

HYDROLOGY AND WATER RIGHTS

Affected Environment: Nearly 700 springs and associated water rights have been inventoried within the WRFO. Chemical treatment of noxious and invasive plant species will likely occur in a number of these locations.

Environmental Consequences of the Proposed Action: Impacts from the proposed action on springs mirror the possible impacts addressed in the water quality portion of this document. However, long term impacts detrimental to spring sources are not anticipated if the mitigation and stipulations that are proposed are adhered to.

Environmental Consequences of the No Action Alternative: See water quality portion of this document.

Mitigation: See water quality portion of this document.

PALEONTOLOGY

Affected Environment: Within the WRFO area the BLM has classified the Chinle, Glen Canyon, Morrison, Cedar Mountain, Mowry Shale, Parachute Creek Member of the Green River

Formation, Wasatch, Mesa Verde and Brown's Park formations as Category I formations meaning that they are known to produce scientifically important fossil resources. These formations are exposed throughout the field office area and could potentially be affected by cultivation control techniques.

Environmental Consequences of the Proposed Action: Impacts to paleontological resources would generally be similar to those described for cultural resources where the rock matrix is highly eroded and fossils are exposed on the surface. Fossils still embedded within the rock matrix would probably not be affected by the proposed action. Spraying of herbicides is not expected to impact fossil bearing formations so no mitigation is required for spraying.

Environmental Consequences of the No Action Alternative: There would be no impacts to paleontological resources under the No Action Alternative.

Mitigation: Vehicular traffic will not be permitted across exposed outcrops of the Chinle, Glen Canyon, Morrison, Cedar Mountain, Mowry Shale, Parachute Creek Member of the Green River Formation, Wasatch, Mesa Verde and Brown's Park formations listed as Category I formations and are fossil bearing formations.

RANGELAND MANAGEMENT

Affected Environment: The project area contains a variety of vegetation types and intermixes. Most of the dense concentrations of whitetop are on the first terrace above the stream channel. For the most part, cattle operations have been the most affected by whitetop. This occurrence has had more to do with the source of infestation than livestock kind.

Environmental Consequences of the Proposed Action: Escort is specific to broadleaf plants but has been found to cause chlorosis and death in some grasses. Generally the specificity of this chemical allows the pest plants to be controlled while leaving the grasses relatively unaffected. With the pest plants removed, the remaining grass species increase in dominance, which decreases the establishment of weed seedlings. Also, as a result of these herbicides specificity to broadleaf's there will be a loss of native broadleaf species, annuals and perennials. Escort is extremely safe for cattle and sheep.

Environmental Consequences of the No Action Alternative: Controlling whitetop is critical to maintaining the forage resource on which livestock operations are dependant. There have been no studies or personal observations where biennial thistles and burdock have been controlled by grazing management alone. Without direct control these noxious weed species spread readily and increase in ground cover. As whitetop competition with native vegetation increases, composition, cover and production of native species decreases dramatically. Loss of forage and resulting decreases in livestock numbers would significantly negatively impact the operators on the affected allotments.

Mitigation: See mitigation and stipulations identified in the proposed action.

WILD HORSES

Affected Environment: Wild horses are managed, and are widely distributed throughout the year on 190,130 acres within the project area. During the spring foaling season wild horse foals rely on mixed shrub communities for cover and protection. Grasses equate to as much as 90% of wild horse diet. The exception to this is in the winter months, during periods of heavy snow accumulation, when wild horses can rely primarily on browse plant species. Whitetop species do not contribute to the forage or cover needs of wild horses. Continued increases of invasive weed colonies degrade the plant communities relied upon by wild horses.

Environmental Consequences of the Proposed Action: Controlling whitetop while they are confined to specific areas would result in increased desirable forage and so would directly benefit the wild horse herd. Conscientious application of the pesticides analyzed in this EA is not expected to adversely impact the health of the wild horse herd, or individual animals within the herd. Selective spraying is not expected to significantly decrease the cover relied upon by wild horse foals.

Environmental Consequences of the No Action Alternative: The continued encroachment of invasive weed species would decrease the availability of desirable grass and browse plant species relied upon by the wild horse herd. Future control of the weeds would require broad applications of pesticide which could result in the loss of cover for wild horse foals and decreased forage for the herd.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: Proliferation of Noxious Weeds is a problem throughout the State of Colorado and the Western United States. Control of Whitetop within the WRFO, as is the intention of the proposed action, would contribute to State-wide and Nation-wide efforts to reduce this proliferation and its impacts on the environment and natural resources.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archaeologist	Cultural Resources, Paleontological Resources
Robert Fowler	Forester	Invasive, Non-Native Species
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Aquatic and Terrestrial Habitat
Melissa Kindall	Hazmat Collateral	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights

Name	Title	Area of Responsibility
Robert Fowler	Forester	Wetlands and Riparian Zones
Chris Ham	Wilderness Specialist	Wilderness
Nate Dieterich	Hydrologist	Soils
Robert Fowler	Forester	Vegetation
Ken Holsinger	Natural Resource Specialist	Fire Management
Bob Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Robert Fowler	Forester	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Chris Ham	Outdoor Recreation Planner	Visual Resources
Melissa Kindall	Range Technician	Wild Horses

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**Finding of No Significant Impact/Decision Record
(FONSI/DR)
CO-110-2006-122-EA**

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed, resulting in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION AND RATIONALE: It is my decision to implement the proposed action for the control of whitetop by herbicidal control. This alternative is approved, subject to the mitigation, stipulations, and safeguard measures identified in proposed action and the Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States (1991). With the mitigation, stipulations and safeguard measures, the potential environmental impacts from implementing the proposed action are expected to be minimal. Control of noxious weeds is in compliance with the White River ROD/RMP which identifies an objective to "Manage noxious weeds so that they cause no further negative environmental, aesthetic or economic impact".

MITIGATION MEASURES: In addition to the mitigation/stipulation measures and safeguard measures contained on pages 2-4 of this EA the following mitigation will apply: 1.) The BLM shall collect and properly dispose of any solid wastes generated by the proposed action.

2.) Follow best management practices (BMPs) as outlined as mitigation in the proposed action. Monitor areas near stream banks and riparian communities that received significant application of herbicides. Should monitoring reveal that a loss of effective ground cover appears to increase localized erosion rates the BLM will implement site specific mitigation (e.g. seeding, bank armoring) to minimize soil loss.

3.) Vehicular traffic will not be permitted across exposed outcrops of the Chinle, Glen Canyon, Morrison, Cedar Mountain, Mowry Shale, Parachute Creek Member of the Green River Formation, Wasatch, Mesa Verde and Brown's Park formations listed as Category I formations and are fossil bearing formations.

NAME OF PREPARER: Bob Fowler 

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: 
Field Manager

DATE SIGNED: 05/16/06